

A RE-EXAMINATION OF *TAENIA MASTERSII* KREFFT, 1871 AND *TAENIA FIMBRIATA* KREFFT, 1871

In 1871, G. Krefft published brief and inadequate accounts of a number of species of cestode collected from Australian mammals and birds. None of the species is recognisable by contemporary standards. Johnston² redescribed and rehabilitated, from Krefft's type specimens, most of the cestodes from birds. He listed *Taenia mastersii* Krefft, 1871 and *T. fimbriata* Krefft, 1871, both from wallabies, but did not redescribe them or comment on their affinities. Beveridge³, in revising the Anoplocephalidae of Australian marsupials, pointed out that Krefft's names, *Taenia mastersii* and *T. fimbriata*, could take priority over newer names currently in use if the species could be rehabilitated. At the time, serial sections of mature proglottides of the types of *T. mastersii* in the Australia Helminthological Collection (AHC) housed in the South Australian Museum (S70) were examined³, and were considered to be identical with *Calostaurus thylogale* Beveridge, 1975 a davaineid cestode recently described from the pademelon, *Thylogale billardieri* in Tasmania⁴. However, because the features of the scolex are essential for specific identification in this genus and because no scoleces were present in the type material examined, no change could be made to the status of *T. mastersii*. No type specimens of *T. fimbriata* were found in Johnston's collection (AHC), but specimens identified in Johnston's handwriting as *T. fimbriata*, collected from *Thylogale stigmatica* in Queensland, were located, and after examination were re-identified as *Progamotaenia zschokkei* (Janicki, 1906)³.

The writer has recently located type material of both *T. mastersii* and *T. fimbriata* in the Australian Museum (G11160 and G11156). The type specimens of *T. mastersii* (G11160) consist of 4 complete specimens including the scoleces. In an intact scolex examined, the rostellar hooks were arranged in a six-lobed circle with hook lengths between 30–40 μm long. These two features, namely the shape of the ring of rostellar hooks and their lengths, are characteristic of *C. thylogale* and clearly identify *T. mastersii* and *C.*

thylogale, supporting earlier observations on the morphology of the mature proglottides³. *C. thylogale* therefore becomes a synonym of *T. mastersii* as *Calostaurus mastersii* (Krefft, 1871) comb. nov. *C. mastersii* was originally collected from an unknown species of wallaby in Queensland. All recent collections are from *T. billardieri* in Tasmania⁴.

The type specimen of *T. fimbriata* in the Australian Museum (G11156) has external features similar to *P. zschokkei* with a broad, prominently fimbriated velum and paired genital pores. Serial histological sections of a fragment of the type specimen also reveal internal features similar to *P. zschokkei*, namely paired genitalia, a single uterus, heavily armed and coiled cirri and large seminal receptacles. However, even the youngest proglottides of the type specimen are nearly gravid, with the uteri obliterating most of the sexual organs and consequently the distinguishing characters of the mature proglottis (distribution and number of testes) cannot be determined. *P. zschokkei* and *P. villosa* (Lewis, 1914) are the only known species of the genus with fimbriated vela and a single uterus. They can be distinguished from one another by the number of testes per proglottis, by the length of the velum and by the pattern of development of the genitalia³. *T. fimbriata* has a velum similar to that of *P. zschokkei*, but assessment of this character is somewhat subjective and neither the number of testes per proglottis, nor the pattern of development of the genitalia can be determined from the type fragment of *T. fimbriata*. Therefore, although *T. fimbriata* and *P. zschokkei* are possibly the same species, their identity cannot be demonstrated beyond reasonable doubt. Since the host and collection locality of the type of *T. fimbriata* are not known, and thus further collections of the parasite cannot be made, *T. fimbriata* must continue to be regarded as a *nomen nudum*.

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¹Krefft, G. (1871). Trans. Entomol. Soc. N.S.W. 2, 206-232.

²Johnston, T. H. (1912). Rec. Aus. Mus. 9, 1-35.

³Beveridge, I. (1976). Aust. J. Zool. Suppl. Ser. No. 44, pp. 110.

⁴Beveridge, I. (1975). J. Helminthol. 49, 129-136.

⁵Beveridge, I. (1981). Trans. R. Soc. S. Aust. 105, 139-147.